BC-80XO CRADLE

QUICK REFERENCE GUIDE

August 23, 2011
PN 8000170.B

ISO 9001 Certified
Quality Management System

Patents

This product is covered by US Pat. 7,948,214 B2.

Additional Patents pending.

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I

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E

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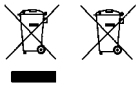

Waste Electrical and Electronic Equipment (WEEE) Directive 2002/96/EC & Waste Batteries Directive 2006/66/EC

This Product, and its accessories, comply with the requirements of the Waste Electrical and Electronic Equipment (WEEE) Directive 2002/96/EC. The batteries used in this Product comply with the requirements of Directive 2006/66/EC.

If your end-of-life Psion product, battery or accessory carries a label as shown here, please contact your local country representative for details on how to arrange recycling. For a list of international subsidiaries, please go to:

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The European Union has mandated that high environmental standards be met in the design and manufacture of electronic and electrical products sold in Europe, to reduce hazardous substances from entering the environment. The "Restriction on Hazardous Substances Directive (RoHS)" prescribes the maximum trace levels of lead, cadmium, mercury, hexavalent chromium, and flame retardants PBB and PBDE that may be contained in a product. Only products meeting these high environmental standards may be "placed on the market" in EU member states after July 1, 2006.

RoHS✓ **RoHS Logo**

Although there is no legal requirement to mark RoHS-compliant products, Psion Inc. indicates its compliance with the directive as follows:

The RoHS logo located either on the back of the product or underneath the battery in the battery compartment (or on a related accessory such as the charger or docking station) signifies that the product is RoHS-compliant as per the EU directive. Other than as noted below, a Psion product that does not have an accompanying RoHS logo signifies that it was placed on the EU market prior to July 1, 2006, and is thereby exempt from the directive.

Note: Not all accessories or peripherals will have a RoHS logo due to physical space limitations or as a result of their exempt status.

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For repair service in North America:

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http://www.psion.com/documents/com/quickReferenceGuides/Help_Desk_Contact_Numbers_A4.pdf

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NOTES

Using THE BC-80X0 Radio Cradle

The BC-80X0 cradle, paired with one or more PowerScan™ M8300 readers, builds a Cordless Reading System for the collection, decoding and transmission of bar-coded data.

It can be connected to a Host PC through an RS-232, USB, Wedge or Pen cable and is suited for single-cradle point-to-point layouts. It can also be connected to a C-BOX and therefore integrated into a fixed scanner application.

The BC-8060 models also allow multi-cradle layouts through an RS-485 Network. For this network connection refer to the PowerScan™ D8330/ M8300 User Manual.

The label on the cradle has LED indicators and a scan finder button. When the button is pressed, the cradle transmits a "broadcast" message. All properly configured scanners (Radio RX Timeout set to keep the radio "awake") that are linked to that base (through a bind or a join sequence) and within radio range coverage will emit a beep sequence once every 2 seconds for 30 seconds. This functionality is useful to:

- verify which scanners are linked to a certain base station
- detect a scanner forgotten somewhere

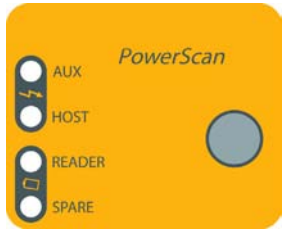
The LEDs signal the BC-80X0 status, as described in the following table:

LED	STATUS
Aux	Yellow On = BC-80X0 is powered by an external power supply. Yellow Blinking = transmission occurs over the Host port.
Host	Yellow On = BC-80X0 is powered by the Host. Yellow Blinking = transmission occurs over the Host port.
Reader	Green On = the reader battery is completely charged. Red On = the reader battery is charging. Orange Blinking = reader battery fault – replace battery. Red / Green Alternatively Blinking = charging error - see Ref. Manual
Spare*	Green On = the spare battery is completely charged. Red On = the spare battery is charging. Orange Blinking = spare battery fault — replace battery. Red / Green Alternatively Blinking = charging error — see Ref. Manual

*This LED refers to the accessory SBS-8000 Spare Battery Slot when mounted to the BC-8060. Not available for BC-8010 models.

Figure 1. Cradle Overview

Figure 2. LEDs



To set up your BC-80X0 cradle you must:

1. Physically install the cradle.
2. Make all system connections.
3. Configure the BC-80X0 cradle.

Installation

Mounting The BC-80X0 Cradle

The cradle package contains the following items:

BC-80X0	1 horizontal base
BC-80X0 Cradle Quick Reference Guide	2 wall-mounting lock hinges
BC-8000 Antenna	4 rubber feet
2 adhesive strips	1 inclined base

The cradle can be mounted for portable or fixed desktop usage, or it can be fixed to a wall. The horizontal base allows portable and fixed desktop usage, while the inclined base provides desktop and wall mounting, allowing for comfortable handling of the PowerScan™ M8300 reader.

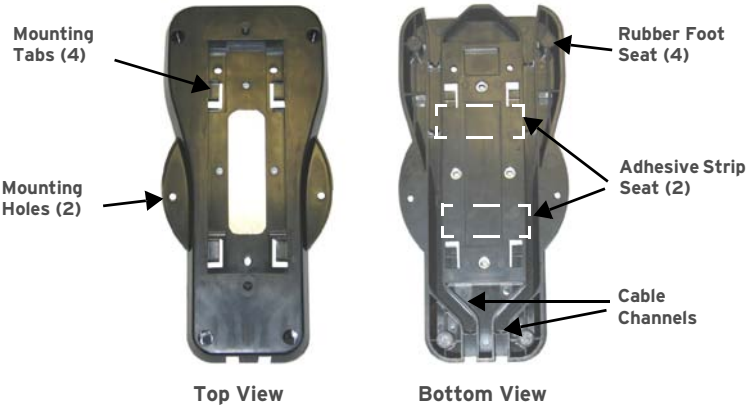
Figure 3. BC-80XO Cradle mounted on the Horizontal Base

Figure 4. BC-80XO Cradle mounted on the Inclined Base

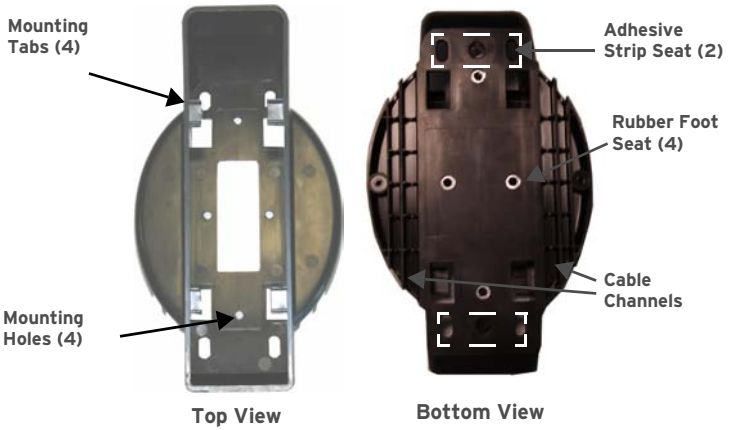
Desktop Mounting

For desktop usage, you can mount the cradle either on the horizontal base, for reduced overall dimensions, or on the inclined base for a more ergonomic taking out and insertion of the reader onto the cradle.

HORIZONTAL BASE

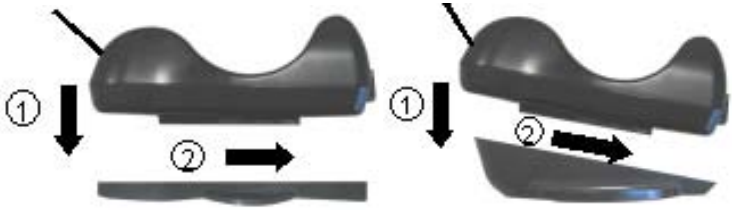


INCLINED BASE



Portable Desktop Use

1. Correctly position the BC-80X0 onto the base by sliding it along the mounting tabs until aligned.



2. Carefully clean the rubber foot seats of the base to remove any impurities that could reduce adhesion.
3. Remove the protective plastic from the rubber feet and stick them onto the bottom surface of the base.
4. If mounting the BC-80X0 cradle, insert the antenna in the appropriate hole on the body of the cradle and screw it clockwise until tight.

Fixed Desktop Use

For fixed desktop installation, use the adhesive strips or fixing screws (not provided) according to your needs.

For mounting with adhesive strips:

1. Position the cradle onto the base by sliding it along the mounting tabs until aligned.
2. Carefully clean the adhesive strip seats of the base to remove any impurities that could reduce adhesion.
3. Remove the protective plastic from one side of the adhesive strips and stick them onto the base surface.
4. Position the cables to be connected to the BC-80X0 cradle along the dedicated channels, as shown in the figures below:

Horizontal Base

Inclined Base

5. Remove the plastic from the other side of the strips and affix the base to the table.
6. If mounting the BC-80X0 cradle, insert the antenna in the appropriate hole on the body of the cradle and screw it clockwise until tight.

For mounting with screws:

1. Position the cables to be connected to the BC-80X0 cradle along the dedicated channels, as shown in the figures below.
2. Position the base on the table and affix it by means of the screws (not provided).
3. Position the cradle on the base by sliding it along the mounting tabs until aligned.
4. If mounting the BC-80X0 cradle, insert the antenna in the appropriate hole on the body of the cradle and screw it clockwise until tight.

Wall Mounting

1. Remove the yellow caps and insert the two wall mounting lock hinges provided with your cradle.

2. Position the cables to be connected to the BC-80X0 cradle along the dedicated channels (see figures on the previous page).

If using the adhesive strips:

3. Carefully clean the adhesive strip seats of the base to remove any impurities that could reduce adhesion.
4. Remove the protective plastic from one side of the adhesive strips and stick them onto the base surface.
5. Remove the plastic from the other side of the strips and affix the base to the wall as indicated in the figure below.

If using mounting screws:

3. Using the mounting holes on the base as a pattern, mark the wall where you desire to mount the BC-80X0.
4. Drill the appropriate size holes and insert the threaded dowels (not provided) into the holes.
5. Position the base on the wall as indicated in the figure below and affix it by means of the screws (not provided).

Figure 5. Inclined Base Wall-mounting

6. Attach the cradle on the base by sliding it along the mounting tabs until aligned.
7. If mounting the BC-80X0 cradle, insert the antenna in the appropriate hole on the body of the cradle and screw it clockwise until tight.

Applying Rapid Point-to-Point Configuration Label (Optional)

A pre-printed bar code label is included in the package for rapid configuration of point-to-point applications. If you wish to use this method, apply this label to the seat provided on the BC-80X0 cradle as shown in the figure. See the PowerScan™ M8300 Quick Reference Guide for the configuration procedure.

System Connections

Connections should always be made with power off!

CAUTION

The BC-80X0 cradle provides two interface connectors and a power supply connector as shown in the figure below:

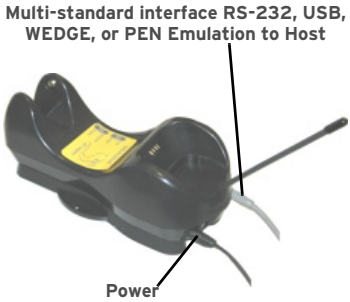
The RS-485 Network connection is available only on BC-8060 models. For details about this type of connection, refer to the PowerScan™ D8330/M8300 User Manual.

To connect the BC-80X0 cradle to the Host through the multi-interface connector, use the cable corresponding to the desired interface type.

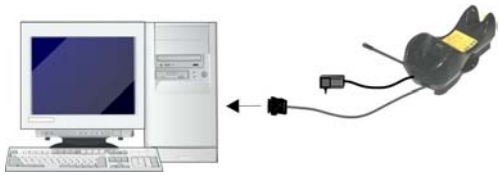
Connecting and Disconnecting the BC-80X0 Interface Cable

The BC-80X0 can be connected to a Host by means of an RS-232, USB, Wedge or Pen cable, which must be simply plugged into the Hos t connector, visible on the front panel of the cradle.

To disconnect the cable, insert a paper clip or other similar object into the hole corresponding to the Host connector on the body of the cradle. Push down on the clip while unplugging the cable. Refer to the following figures:

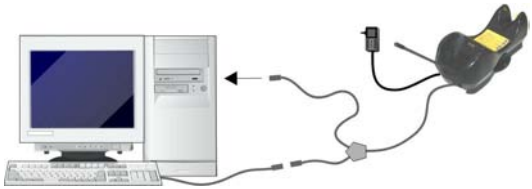


RS-232

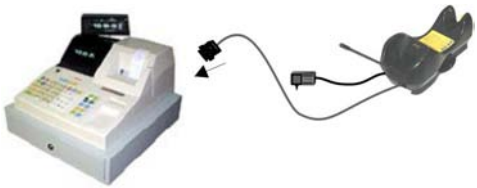


USB

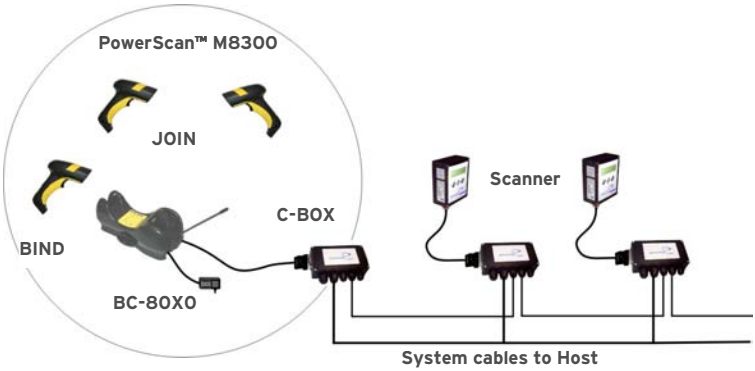
WEDGE



PEN



C-BOX



BC-80X0 Configuration

BC-80X0 configuration can be performed in two ways:

- by sending configuration strings from the Host PC via the RS-232 or USB-COM interface

- OR -

- by reading configuration bar codes with the PowerScan™ M reader.

Serial Configuration

By connecting the BC-80X0 to a PC through an RS-232 or USB-COM interface cable it is possible to send configuration strings from the PC to BC-80X0.

Configuration Bar Codes

Once you have performed system connection and PowerScan™ M reader configuration, you can configure the BC-80X0 cradle by reading configuration bar codes. Apply power to the BC-80X0.

For PowerScan™ M configuration, refer to the "PowerScan™ M8300 Quick Reference Guide".

To configure the BC-80X0 using the PowerScan™ M reader (the one paired to the cradle with the Bind command), follow the procedure according to the interface selected.

Restore Default

Scan the bar code below to restore the BC-80X0 to its default configuration settings. See "BC-80X0 Default Configuration" on page 17 for more information.

Restore BC-80X0 default

To change the defaults, refer to the "PowerScan™ D8330/M8300 User Manual", downloadable from the website.

Interface Selection

Select and scan one of the interface codes in the following tables, according to your application.

USB INTERFACE SELECTION

USB-KBD

USB-KBD – ALT-mode

USB-COM*

USB-IBM-Hand Held

USB-IBM Table top

USB KBD-APPLE

*When configuring USB-COM, the relevant files and drivers must be installed from the USB Device Installation Software. To download the software, refer to PowerScan™ D8330/M8300 User Manual available online at http://www.psion.com.

PEN EMULATION INTERFACE SELECTION

PEN

Interface Selection (continued)

RS-232 INTERFACE SELECTION

RS-232 Standard

Nixdorf Mode A

Fujitsu

ICL Mode

WEDGE INTERFACE SELECTION

Wedge IBM AT or PS/2 PCs

PC Notebook

PC Notebook - ALT mode

IBM AT - ALT mode

Interfaces for IBM XT and IBM Terminals 3151, 347X and 348X can be selected from the PowerScan™ D8330/M8300 User Manual available online at http://www.psion.com.

Keyboard Nationality

USB-KBD and Wedge users should select one of the following wedge keyboard nationality codes according to your keyboard.

Belge

Deutsch

English

Español

Français

Italiano

Svenskt

USA (Default)

The following Keyboard Nationality selections are only valid for IBM AT compatible PCs:

Japanese

Russian (Latin)

Russian (Cyrillic)

Hungarian

Slovenian, Croatian, Serbian (Latin)

Romanian

Czech Republic

Data Format Terminators

For your convenience, some common Terminators are given below. For other Header/Terminators selections, Data Format and Advanced Data Format parameters see the PowerScan™ D8330/M8300 User Manual.

CR-LF

Enter

Tab

None

BC-80X0 Default Configuration

USB-KBD DEFAULT SETTINGS

USA keyboard, FIFO enabled, inter-character and inter-code delays disabled, USB keyboard speed normal.

DATA FORMAT: code identifier disabled, code length not transmitted, character replacement disabled, reader and cradle address stamping disabled, reader and cradle address delimiter disabled, time stamping disabled, time stamping delimiter disabled, no header, terminator = ENTER.

RS-232 DEFAULT SETTINGS

9600 baud, no parity, 8 data bits, 1 stop bit, no handshaking, ack/nack protocol disabled, FIFO enabled, delay disabled, 5 sec. rx timeout

DATA FORMAT: code identifier disabled, code length not transmitted, character replacement disabled, reader and cradle address stamping disabled, reader and cradle address delimiter disabled, time stamping disabled, time stamping delimiter disabled, no header, terminator = CR-LF.

WEDGE DEFAULT SETTINGS

USA keyboard, Caps Lock off, Caps Lock Auto-Recognition enabled, num lock unchanged, inter-character and intercode delay disabled, control character emulation = ctrl+shift+key.

DATA FORMAT: code identifier disabled, code length not transmitted, character replacement disabled, reader and cradle address stamping disabled, reader and cradle address delimiter disabled, time stamping disabled, time stamping delimiter disabled, no header, terminator = ENTER.

PEN DEFAULT SETTINGS

Interpret operating mode, conversion to code 39, output level normal, idle level normal, minimum output pulse 600µs, overflow medium, inter-block delay disabled.

NETWORK PARAMETERS

RS-485 network disabled (for BC-8000 only).

Operating Test

Read the TEST codes below.

EAN-8

EAN-13

CODE 39 (NORMAL)

CODE 128

INTERLEAVED 2 OF 5

YOUR SYSTEM IS NOW READY TO READ CODES AND SEND DATA TO THE HOST.

Technical Features

BC-80X0		
Electrical Features		
Supply Voltage		
External Power	10..30 VDC	
Host Power	5 VDC ±10%	
Power Consumption		
External Power	max. 10 W (charging) *	
Host Power	max. 500 mA (charging)	
Indicators	Ext. Power/Data yellow LED Host Power/Data yellow LED Reader batt. state green/red LED Spare batt. state green/red LED (BC-8060 only) beeper	
Time of Recharge		
External Power	max. 4 hours with 2150 mAh Li-Ion battery	
Host Power	max. 10 hours with 2150 mAh Li-Ion battery	
Radio Features	European Models	USA Models
Radio frequency	433.92 MHz	910 MHz
Bit Rate	19200 baud	36800 baud
Range (in open air)	50 m	30 m
Environmental Features		
Working Temperature		
Radio	-20° to +50 °C / -4° to +122 °F	
Battery Charging	0° to +40 °C / +32° to +104 °F	
Storage Temperature	-20° to +70 °C / -4° to +158 °F	
Humidity	90 % non condensing	
Protection Class	IP40	
Mechanical Features		
Weight without mounting base	about 380 g / 13.4 oz	
Dimensions (without antenna)	240 x 108 x 95 mm / 9.44 x 4.25 x 3.74 in	
Material	ABS	

*Having a switching regulator inside, the BC-80X0 draws the same power, regardless of the supply voltage. In other words, as the input voltage increases the current drawn decreases.

System Configuration	BC-80X0	STARGATE™
Max number of devices per base station	32	255
Max number of devices in the same reading area	2000	
Max number of base stations in network	16 (including cradle Master)	

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CE 08

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declares that the
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BC-80X0, RF Base Charger

e tutti i suoi modelli
and all its models
et tous ses modèles
und seine Modelle
y todos sus modelos

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ETSI EN 301 489-3 v1.4.1, August 2002:	ElectroMagnetic Compatibility and Radio spectrum Matters (ERM); ElectroMagnetic Compatibility (EMC) standard for radio equipment and services; Part 3: Specific conditions for Short-Range Devices (SRD) operating on frequencies between 9 kHz and 40 GHz
ETSI EN 300 220-3 v1.1.1, September 2000:	Electromagnetic compatibility and Radio spectrum Matters (ERM); Short Range Devices (SRD); Radio equipment to be used in the 25 MHz to 1000 MHz frequency range with power levels ranging up to 500 mW; Part 3: Harmonized EN covering essential requirements under article 3.2 of the R&TTE Directive
EN 60950-1, December 2001:	Information technology equipment – Safety – Part 1: General requirements

April 16, 2008